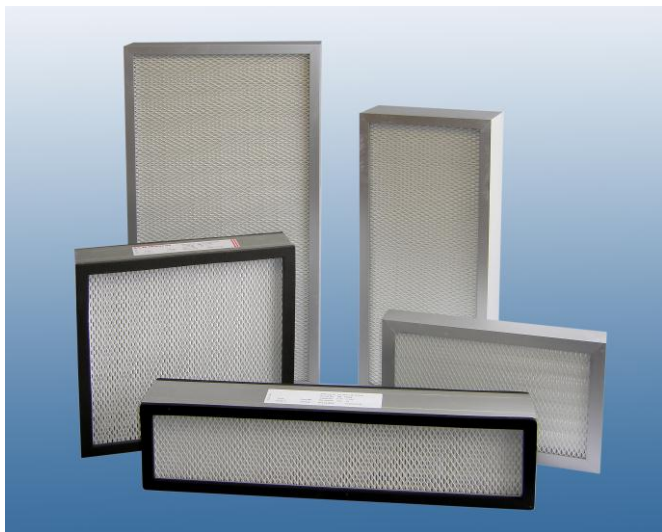




## HEPA V Panel Air Filter Range



### HEPA 'V' Panel Air Filter Range: -

4 standard efficiencies from 95% - 99.99996% to suit a wide range of high integrity air filtration applications.

4 standard media pack depths of 1" to 4" to provide varying flow, differential pressure and dust loading characteristics.

3 types of sealing method; Gasket, Knife-edge & Silicone Gel to suit a wide range of new and existing applications

13 standard extruded anodised aluminum frame profiles that can be further modified for specific applications.

Special products and materials of construction.

### Typical Industries:

Pharmaceutical, electronics, telecom's, food and beverage manufacturing, hospitals, pharmacies, microbiological and research facilities.

### Typical Applications:

Terminal filter units, clean room ceilings, fan filter units, ultra clean theatre canopies, laminar flow cabinets, safety cabinets, benches, containment suites, down-flow booths and isolators.

The range of M.C. Air Filtration HEPA 'V' Panel Air Filters have been specifically developed over many years to provide a comprehensive portfolio of products to suit varying client, industry and regulatory requirements.

HEPA 'V' Panel Air Filters provide class leading performance and integrity and are designed for use in a wide range of new and existing applications.

Our standard range incorporates 13 standard frame types manufactured from extruded anodized aluminum profile and is further extended by our ability to manufacture filter panels with galvanized, stainless steel or wood frames.

M.C. Air Filtration specializes in the manufacture of HEPA filters to suit OEM applications and critical process control.



## Materials of Construction:

- Frames: Anodised aluminum extrusion  
Frames can also be manufactured from galvanized, stainless steel or wood
- Protection: White painted expanded steel or stainless steel grid to both filter faces
- Media: Non-flammable & water repellent microfine glass paper machine pleated into a rigid "minipleat pack" of appropriate depth incorporating bonded glass thread spacers to provide positive pleat separation
- Seal: The media pack is sealed into the frame with a polyurethane bond
- Gasket type: 15x6mm flat profile black PVC sponge gasket  
A range of alternative materials is also available such as neoprene, silicone & polyethylene
- Gel type: Silicone Polymer



## Filter testing and validation.

Each HEPA 'V' panel filter will be individually factory tested and issued with a serial number and factory test certificate for future trace-ability.

Filters are provided conforming to the requirements of BS EN 1822 : 2008.

Due to the prevalence of non-standard filter size's manufactured by M.C. Air Filtration and customer requirement for leak free product we individually full face Photometer scan test each filter panel in accordance with PD6609 using a DOP test aerosol generated by either Laskin nozzle or thermal generator.

## The Minipleat Filter Media Pack:

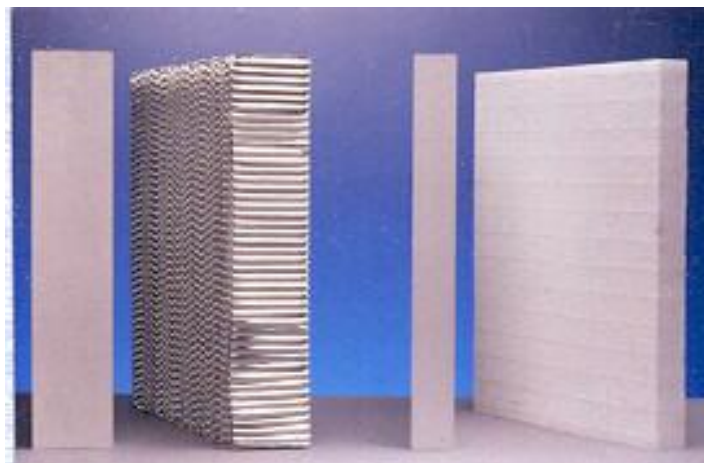
We offer 4 standard depths of minipleat filter pack.

Series 3000	30 mm deep
Series 5000	50 mm deep
Series 7000	70 mm deep
Series 100	100 mm deep

Pack depths can be selected to suit varying requirements such as nominal duty, initial pressure drop, efficiency or service life.

## Filter Grades:

We manufacture HEPA 'V' panel air filters with a range of filter paper's to provide finished product with filtration efficiencies from 85% to 99.99996%



### **Gasket Sealing HEPA 'V' Panel Filters:**

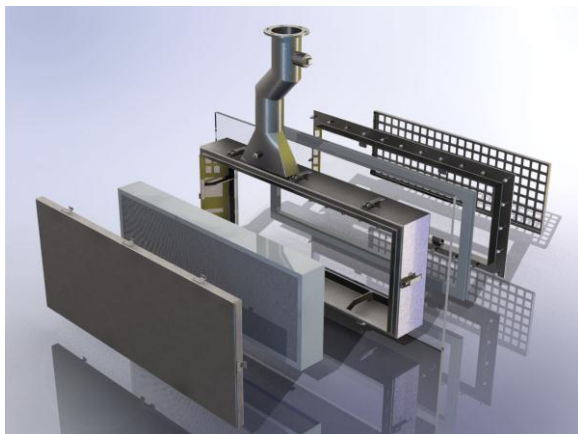
Gasket seals provide the traditional sealing method for HEPA 'V' Panel filters.

Gaskets can be applied to a single face or both faces to suit the required application.

We provide flat profile gaskets to cover the width of the filter frame.

Our gaskets are suitable for use in conjunction with DIN double knife-edge sealing system.

We will provide a range of different gasket materials to suit customer specific applications.



### **Fluid Sealing HEPA 'V' Panel Filters:**

The Fluid sealing arrangement provides the user with enhanced confidence that during installation the Filter-Ceiling interface will seal with no air bypass and remain leak free throughout the service life of the filter.

M.C. Air offer two types of Fluid Seal arrangement: -

#### **GEL in Channel HEPA 'V' Panel Filters:**

GEL in channel HEPA filters are used in conjunction with an appropriate Knife-edge frame system that forms part of the permanent room or housing structure.

The GEL in channel HEPA 'V' Panel filter reduces down time during filter replacement, as there is no need for the time consuming stripping out or topping up of the Gel in the ceiling system.

#### **Knife-Edge HEPA 'V' Panel Filters:**

Knife-edge panel filters are used in conjunction with an appropriate GEL in channel frame system that forms part of the permanent room or housing structure.

M.C Air Filtration also manufactures and installs a range of ceiling system for use with either Knife-edge or GEL in channel HEPA 'V' Panel filters.



## HEPA V Panel Air Filter Standard Range

	Filter Pack	Frame Depth	Sealing Position
<b>Gasket Seal Panels</b>			
MCF 20	Series 3000	40mm	Type 'A' Dirty Face Gasket Type 'C' Clean Face Gasket Type 'B' Both Face Gasket
MCF 1	Series 5000	66mm	
MCF 9	Series 7000	85mm	
MCF 31	Series 7000	110mm	
MCF 8	Series 100	124mm	
MCF 7	Series 5000, 7000 or 100	150mm	
<b>Gel Seal Panels</b>			
MCF 3	Series 5000	66mm	Side Channel
MCF 13	Series 7000	85mm	
MCF 14	Series 5000	85mm	Top Channel
MCF 19	Series 100	143mm	
<b>Knife Edge Panels</b>			
MCF 4	Series 5000	70mm	37mm long side leg
MCF 24	Series 5000	120mm	50mm long knife to the frame bottom. Which can be reduced in length prior to manufacture of the filter panel
MCF 16	Series 7000	138mm	

### Quality Control:

All M.C. Air Filtration products are designed, manufactured and tested under strict quality controlled conditions and in accordance with our BS EN ISO 9001:2008 accreditation. Each HEPA filter will be individually factory tested and issued with a serial number & test certificate for future trace-ability.

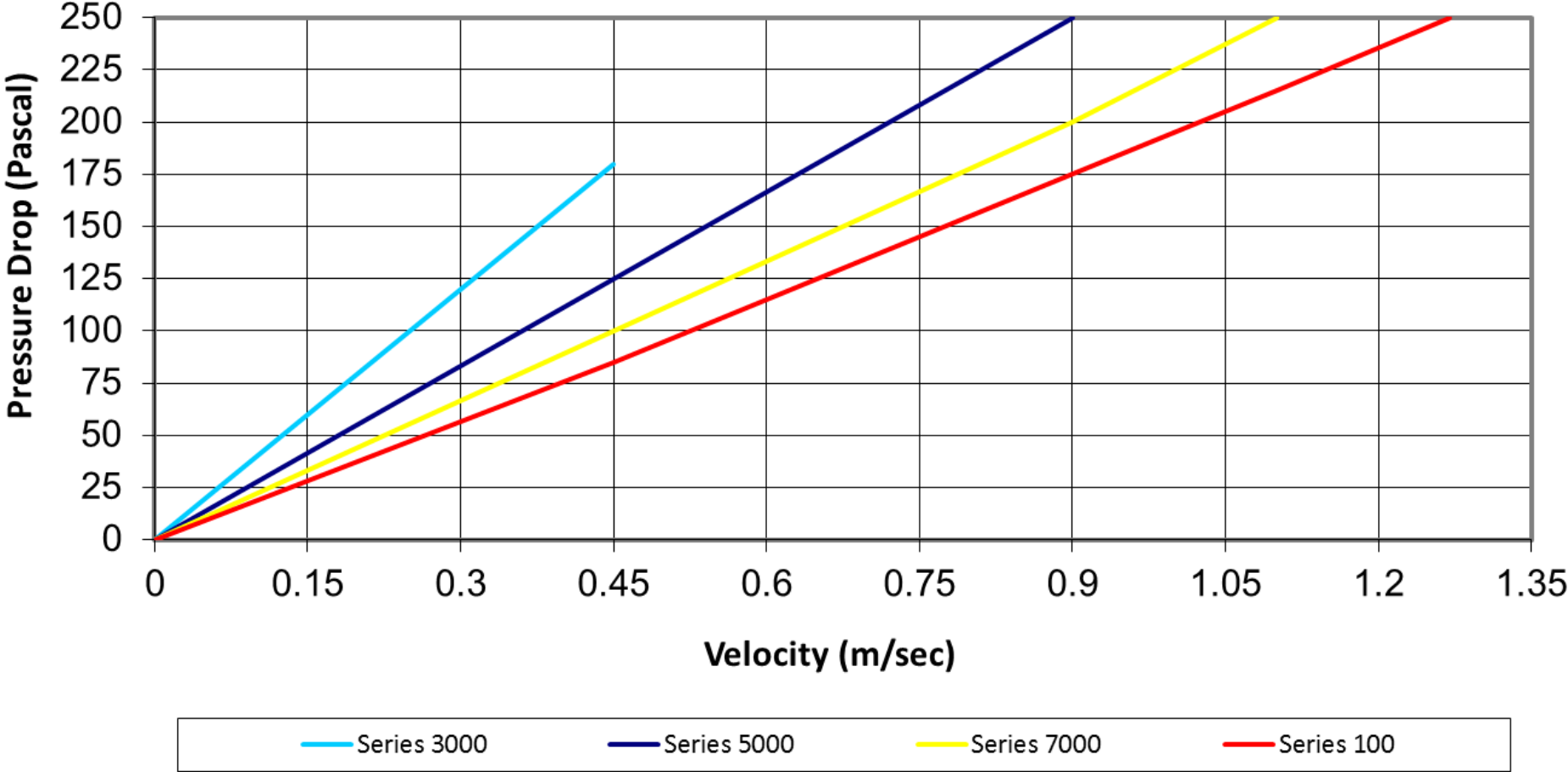
Alternative sizes, specifications and materials of construction are available.

Please contact this sales office to discuss your specific requirement and for further information on the specific product or range of products available.

## HEPA V Panel Air Filter Range Performance Characteristics

	Series 5000 : 50mm deep Minipleat Pack			Series 7000 : 70mm deep Minipleat Pack			Series 100 100mm deep : Minipleat Pack		
	Low Grade	Standard Grade	Super Grade	Low Grade	Standard Grade	Super Grade	Low Grade	Standard Grade	Super Grade
Filter Grade	HEPA		ULPA	HEPA		ULPA	HEPA		ULPA
Efficiency <sup>1</sup>	95% @ 0.3µm	99.997% to 99.999% @ 0.3µm	99.9998% @ 0.12µm	95% @ 0.3µm	99.997% to 99.999% @ 0.3µm	99.9998% @ 0.12µm	95% @ 0.3µm	99.997% to 99.999% @ 0.3µm	99.9998% @ 0.12µm
Design Duty	0.45 m/sec								
Max Initial Pressure Drop <sup>2</sup>	40 Pascal	125 Pascal	170 Pascal	30 Pascal	100 Pascal	140 Pascal	25 Pascal	90 Pascal	125 Pascal
Max Duty	0.9 m/sec	0.9 m/sec	0.45 m/sec	1.12 m/sec	1.12 m/sec	0.45 m/sec	1.27 m/sec	1.27 m/sec	0.45 m/sec
Max Initial Pressure Drop <sup>2</sup>	80 Pascal	250 Pascal	170 Pascal	60 Pascal	250 Pascal	140 Pascal	50 Pascal	250 Pascal	125 Pascal
Maximum (Dirty) Differential Pressure Drop 600 Pascal									
Maximum Working Temperature 70°C					Maximum Working Humidity 80%				
<sup>1</sup> Stated efficiencies are achieved at the filter Design Duty. <sup>2</sup> ± 10% tolerance									
We reserve the right to change product specification without prior notice									

# Performance - Standard Grade Media Packs



# Performance - Super Grade Media Packs

